

09/837, 387 Drawig / last page

We claim:

1. A method of making a channel estimate, comprising:

determining at least first and second confidence levels that a transmitted data symbol has respective first and second values based on a received data symbol corresponding to the transmitted data symbol; and

generating a channel estimate based on the first and second confidence levels.

2. The method of claim 1, wherein the first confidence level represents a first probability that the transmitted data symbol is the first value and the second confidence level represents a second probability that the transmitted data symbol is the second value.

3. The method of claim 1, wherein the generating step generates the channel estimate based on the first and second confidence levels and the received data symbol.

4. The method of claim 1, further comprising:

generating an overall channel estimate by obtaining a weighted average of a plurality of channel estimates generated by said generating a channel estimate step over a time window of predetermined width.

5. A method of making a channel estimate, comprising:

generating a confidence factor according to a confidence function and a received data symbol, the confidence factor representing a confidence level that a transmitted data symbol corresponding to the received data symbol has a particular symbol value; and

generating a channel estimate based on the confidence factor and the received data symbol.

6. The method of claim 5, wherein the confidence function includes generating a log-likelihood ratio on the received data symbol.

7. The method of claim 5, wherein the generating a confidence factor step generates the confidence factor according to the confidence function, the received data symbol and a variance of the channel estimate.

8. The method of claim 5, further comprising:

generating an overall channel estimate by obtaining a weighted average of a plurality of channel estimates generated by said generating a channel estimate step over a time window of predetermined width.

9. A method of making a channel estimate, comprising:

determining a strength indicator based on a received data symbol corresponding to a transmitted data symbol, a value of the strength indicator indicating a likelihood that the transmitted data symbol is a particular value; and

generating a channel estimate based on the confidence factor and the received data symbol.

10. The method of claim 9, wherein in a bi-phase shift keying communication system, the strength indicator approaches a value of 1 the greater the likelihood that the transmitted data symbol was 1 and approaches a value of -1 the greater the likelihood that the transmitted data symbol was -1.

11. The method of claim 9, wherein the determining step determines, for each possible symbol value, a probability that the transmitted data symbol is the possible symbol value based on the received data symbol, and determines the strength indicator from the determined probabilities.

12. The method of claim 11, wherein the determining step performs the probability determinations and the strength indicator determination according to a predetermined function.

13. The method of claim 9, further comprising:

generating an overall channel estimate by obtaining a weighted average of a plurality of channel estimates generated by said generating a channel estimate step over a time window of predetermined width.